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GENERAL STAFF

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No 972/E1 [expansion unknown]- and ehygtsto [evidently "hygieni"--hygiene and "toimisto"--office] [Provisions and Hygiene Office (?)]/Dbc [expansion unknown]

Subject: Guidance on Encampment Hygiene

Reference: 16 June 1976 presentation by the chief of the General Staff  
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Kiint [probably directing the "attention" of an officer to the letter]/76

This "Guidance Regarding the Setting Up of Encampment Hygiene at a Permanent Encampment Area" is to be put into use immediately.

In each instance the leader of a force is responsible for seeing to it that the directives and recommendations of this guidance are followed when exercises are carried out in the field.

The guidance is to be communicated to cadre personnel in such detail as need may dictate. Encampment forces are to be well grounded in the functional directives of the guidance, and superiors are to exercise surveillance over the carrying out of encampment hygiene measures when instructional exercises occur in the field.

The constructional treatment methods presented in the guidance are to be carried through within the framework of a development program the timetable for the accomplishment of which shall determine the time leeways that will be acceptable in practice.

Chief Veterinary Surgeon  
of the Defense Forces

By: Veterinary Surgeon

(stamp)

Matti Waris

Provisions Hygienist

By: Veterinary Captain

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GUIDANCE REGARDING THE SETTING UP OF ENCAMPMENT HYGIENE  
AT A PERMANENT ENCAMPMENT AREA

I. General

The purpose of encampment hygiene is that of preventing the coming into being of dangerous and risky health factors arising from the environment, and on the other hand that of limiting prejudicial effects occasioned to the environment by the activity of forces.

Our permanent encampment areas, which are comparable (in the load they impose) to garrisons or to the largest encampment areas of our country, are imposing ever more burdensome hygienic problems which cannot be mastered without concrete measures. This guidance puts into application, with respect to the particular circumstances under which the defense forces operate, the classification bases for encampment areas that were laid down by Decision No 677/73 of the Ministry for Internal Affairs, and also the directives and recommendations issued by the Public Health Service, in its Circular Letter No 1546/73, regarding the organization of hygienic measures at encampment areas.

The directives and recommendations presented in this guidance are intended for use in determining proper placement of lodging and servicing areas on terrains the daily load upon which exceeds 200 men.

When permanent encampment areas are being used for an occasional exercise, the aim at the housekeeping centers and/or the lodging areas of companies shall be that of resolving problems having to do with field latrines, solid wastes, and waste water in the spirit of this guidance.

The directives of this guidance shall be applied in an occasional exercise that may take place in other areas as well.

II. Water Hygiene

The staff of a military province shall see to it that the household and swimming waters of an encampment area meet the quality requirements set forth in Circular Letters No 1501 and No 1578 of the Public Health Service.

The Defense Ministry will see to the taking of household and swimming water specimens at encampment areas in accordance with regulations. When special occasion arises, additional specimens shall be taken (Note: microbiological testing only) in accordance with guidelines issued by the military province staff. In those instances the specimens shall be tested at the nearest provisions and water laboratory. Bills shall be presented to the Provisions and Hygiene Office of the General Staff for payment.

In collaboration with the Defense Ministry and the hydraulic district affected, the military province shall carry out a determination of the areas within which the groundwaters of the encampment area are formed, and in event of need shall specify the protected areas within which all polluting activity, such as the discharge of waste water, the washing of automotive vehicles, the changing of oil, the digging of gravel, etc., shall be prohibited.

The state of water bodies shall also be inspected through the agency of the military province staff, and in such activity particular attention shall be devoted to deleterious changes occasioned by any possible discharges of waste water, such as pollution of water bodies, excessive water plant growth, and the like.

Faults that cannot be corrected by local agencies are to be brought officially to the attention of the Defense Ministry for the institution of more extensive operations.

#### Household Water

All water used for drinking, for the preparation of food, for the washing of kitchen utensils or messkits, or for the care of the sick shall meet the quality requirements for household water.

Adequately good household water shall be obtainable at any encampment site. Water shall be taken either from the public water main system, from a water supply source constructed for the site, from a well, or from a roofed-over spring.

In the close neighborhood of water sources no polluting activities (latrines, washing stands, the washing of automotive vehicles, etc.) shall be permitted. The minimum protective distance shall be from 50 to 200 meters, depending on the water permeability of the ground and the incline of the surface. In event of need the water source shall be protected by fencing.

A well shall be so constructed that surface water shall not become mingled with the well water, and that refuse and other impurities shall not get into the well. Water shall be drawn from the well through the use of a pump.



A spring used as a water source shall be roofed over, and water shall again be withdrawn through the use of a pump.

If containers are used in the consumption, distribution, or storage of water, for instance at a lodging area, the containers shall always be emptied of old water and rinsed, or if necessary washed, in connection with their use. Water containers are to be protected in such fashion that the water shall not be warmed under direct sunlight. The containers shall have dustproof coverings.

During an occasional exercise the housekeeping water used shall originate from an approved water source. If as an exceptional matter it should become necessary to use surface water or water which is in some other way suspect, this water shall be held at the boiling point for at least 5 minutes' time before use, and water purification tablets shall be used as provided by the instructions on their packagings.

### III. Provisions Hygiene

The feeding of large forces under camp conditions is associated with certain danger factors which render possible the arising of mass illnesses originating from provisions. It is indispensable to instruct not only kitchen and custodial personnel, but also the command of the encamped troops, regarding these various factors. In order to prevent infections arising from provisions it is indispensable to see to it that:

- a) the quality of provisions is irreproachable;
- b) the provisions are pretreated in a way appropriate for field use;
- c) acceptable conditions for the storage and handling of provisions be created;
- d) water meets quality requirements imposed upon household water;
- e) the handling of waste functions irreproachably; and
- f) kitchen personnel succeed in maintaining good personal hygiene.

### Locations Where Food Is Prepared

The neighborhood of a housekeeping center shall be protected against all polluting activity and unnecessary traffic. In a dry, windy atmosphere threatening dust conditions may be counteracted in case of need by sprinkling the ground surface.

The preparation of food shall take place in a roofed shed set up for the purpose. The shed shall be protected by walls at its sides and shall be provided with a concrete floor which shall have a drainage system. In the

shed for food preparation there shall be a working plane surface for handling provisions, the surface of which shall be of a material easy to keep clean. The vessels used in the preparation of food shall have a rack or other storage area where the vessels can be kept clean and dry. At the cooking area there shall be available a supply of water adequately meeting the requirements for household water, and if possible it shall be running water. For washing hands there shall be a permanent washing area attached to the cooking shed, and it shall be supplied with soap, a nail brush, and single-use towels. The cooking shed shall have adequate lighting. There shall be adequate room and shelves for the temporary storage of provisions.

The personnel taking part in the preparation of food shall keep the protected area clean, and it shall not be used for any other purpose. Protective clothing shall be kept in a place reserved for the purpose, one in which no other articles or provisions shall be kept.

Smoking is prohibited in the food preparation shed.

In the vicinity of the food preparation area, but no closer than 50 meters away, there shall be a latrine which shall be reserved for the exclusive use of kitchen personnel. In connection with the latrine there shall be provision for washing of the hands; but in the wintertime this may be done in the kitchen.

There shall be a special washing table for the washing of vessels used in the preparation of food, and both hot and cold water shall be available in sufficient quantity in its immediate vicinity. The water used for the washing shall meet the quality requirements for household water. The most highly recommended position for the washing place is within the shed, in a separate area partitioned off by a wall, but it may also be otherwise placed, in the immediate vicinity of the food preparation area.

The washing area shall have a drainage system. For initial collection of food leavings there shall be at the place where meals are prepared garbage receptacles provided with lids, which shall be emptied and cleaned daily.

The place where meals are prepared, together with its installations, shall always be kept irreproachably clean and in order.

#### Provisions Storage

At an encampment area there shall be both cold rooms and dry rations storage premises for the preservation of provisions. Provisions storage areas are intended for the short-term preservation of provisions. The premises are to be built roomy enough. There shall be lighting in all provisions storage premises.

A mechanically refrigerated cold room is the most highly recommended way of treatment at large encampment areas. Also suitable as a cold room is a



cellar which is built so that its temperature level does not rise above 10° Centigrade even in the summertime. Meat, meat products, delicatessen wares, and other provisions that spoil easily are not to be kept more than 48 hours in the summertime unless the cold room is mechanically refrigerated. Nor are these to be kept in a cellar at ground level or in the same premises as potatoes and beets.

The walls, roof, and floor of a cold room and its installations are to be cleaned upon each item's being taken into service, and during the encampment period every time occasion for this arises.

Dry ration storage areas are to be built and positioned so that they remain as cool as possible in the summertime. The walls, floors, and ceiling of the dry ration storage area are to be kept clean. In the storage area there shall be sufficient shelving for the preservation of provisions. Sacks, boxes, and other similar provisions packagings shall not be set directly on the floor, but instead there shall be beneath them isolating gratings the height of which above the floor shall be about 10 cm.

#### Transport of Provisions

The platforms of vehicles used in provisions transport shall be kept clean. On open-platform vehicles unpackaged provisions are to be covered with a protective covering. When animal carcasses and parts thereof are being transported, in order to avoid dirtying of meat clean paper shall be used as a protective layer.

#### Washing of Messkits

The table utensils of personnel such as kits, plates, spoons, etc., shall be washed personally by each individual in a place specially designated for that purpose. These premises shall be equipped with garbage containers, handled washing brushes, hot soapy water, and hot water (near the boiling point) for final rinsing of utensils. The water must meet the quality requirements for household water. Washing and rinsing water shall not be taken out of boiling containers with one's own utensils, but instead a special ladle shall be provided for that purpose. After use, brushes shall be cleaned with hot water.

Washing is best done at kit-washing stands provided for the purpose, from the gutters of which water is led off through a precipitation well and onward so as to be absorbed in the ground (Figure 1).

At mealtimes one is to see to it that meals are not dispensed into dirty utensils. The use of so-called kit bags of plastic is not regarded as desirable.

#### IV. Garbage Handling

The encampment area is to be kept clean and garbage handling is to be organized so that threats to health may not arise. Burying in the ground refuse that will pollute groundwater or the earth surface must not be permitted in permanent encampment areas (latrine refuse, food garbage, oil wastes). Every camp force is responsible for the area's being left in irreproachable order when the camps are abandoned.

##### Solid Refuse

Supervision over the handling of solid refuse is to be assigned to persons designated by name during the camp period.

Food wastes are to be gathered into tight, lidded garbage receptacles provided for the purpose. There must not be put into these refuse unsuitable for feeding animals, such as plastics, paper, glass, etc. Disposal of refuse is best done if it is sold to feed animals, upon which sale one reaches agreement with the buyer to the effect that the garbage containers shall be emptied often enough. After each emptying the garbage receptacles shall be cleaned and rinsed with hot water. Garbage receptacles are to be placed in a shaded spot far enough away from the place where meals are prepared.

Other solid wastes are to be collected into refuse sacks or drums available in the encampment area. In a lodging area it is recommended that there be provided one 125-liter refuse sack for each three to four sets of tent inmates. Refuse sacks and drums are to be emptied often enough. Disposal of refuse can take place in various ways, depending on local conditions.

a. By burning. Combustible wastes can be disposed of by burning. Burning takes place most simply, most completely, and with least fire risk in burning ovens. If burning ovens are not available one can burn the refuse in an open barrel, but in such cases fire safety considerations are to be given attention. If combustible wastes are disposed of by burning, they must be separated out from other refuse even at the collection stage, for instance by providing a separate refuse sack for the combustible wastes.

b. By transporting elsewhere. If the encampment area is located near a garrison, waste disposal shall be conjoined with the garrison's waste disposal and the refuse shall be transported out of the encampment area. Waste handling can also be dealt with by using the services of private or community waste disposal businesses, whereupon the enterprise in question takes care of the removal of the refuse.

c. A trash dump. The setting up of a trash dump may become pertinent in encampment areas that are large in point of numbers of users. The dump area must be big enough for use thereof to be feasible also for covering needs that may arise in the future. The dump area may be set up only on the basis of a plan made by the Defense Ministry.



The dump site is to be kept constantly in order. In order to carry out proper maintenance of the dump area, there ought to be sufficient earth available for covering over. Filling of the dump area must take place in accordance with a plan adopted in advance, and not by strewing refuse in various parts of the dump area at random. Supervision over the dump area should be set up in regular fashion so that refuse is properly covered over and so that areas in the vicinity of the dump area that may have been dirtied are cleaned up.

Directional signs shall be installed at the site of the dump.

#### Waste Water

Waste water is to be dealt with in such fashion that they will not occasion a menace to health and will not pollute ground or surface water. Waste water should not be discharged into a watercourse. If waste water has to be discharged into a watercourse, this is to be done in accordance with a plan approved by the Defense Ministry, via a precipitation well or wells, the regular emptying of which shall be provided for.

Waste water can be absorbed into the ground at encampment areas where this can take place without groundwater becoming contaminated. Depending on the amount of waste water and the character of the ground surface, an absorption well may become acceptable on occasional exercises (Figure 2). When major waste water quantities are involved, absorption ditches or fields can be used, in accordance with a plan drawn up by the Defense Ministry. Absorption takes place best in gravel or sandy soil, under which circumstances the dangerous effects of waste water are, however, extended over a broader area. Waste water drained away from a permanent washing place for absorption shall be led through a precipitation well.

One effective purification procedure for waste water is absorption into a marsh, in which the waste water is absorbed through turf [or peat]. The peat ought to be moss or sphagnum, and the minimum thickness of the peat layer should be about 1 meter.

Waste water can also be collected in wells having no outlet, and can be conveyed from there to another place for treatment.

If waste waters are discharged into a watercourse or are absorbed into the ground from sewage systems used by more than 200 persons, this should be reported to the district water board concerned. The Defense Ministry takes care of making this announcement.

#### Latrines

During encampment periods, supervision over latrines is assigned to a person specified by name.



There shall be adequate latrines on an encampment area (at least one latrine stand per 25 men). Latrines are to be located at a sufficient distance (at least 20 meters) from a lodging area, a water source (20-200 meters), an area for the preparation of food, or a coast or bank. Urine pits can be dug about 15-20 meters from tents. The pits are to be filled in upon conclusion of the encampment period, at the latest. Dry latrines are best suited to an encampment area. Refuse is collected into a cistern which is emptied with adequate frequency. Refuse is conveyed to a dump to be converted into compost, or is delivered to private or community refuse disposal businesses to be dealt with.

The foundation of a latrine shall be impenetrable to liquids--for example, a concrete foundation. The foundation receptacles of a dry well should be easy to empty and their upper edge should not be more than 5 cm below the seats, so that dirtying the outsides of the receptacles may be avoided. Galvanized metal receptacles and ones of plastic are suitable as foundation receptacles. Single-use receptacles may also be used.

An opportunity to wash the hands should be provided at latrines whenever possible. In such connection it is also desirable to provide soap. Providing an opportunity to wash the hands at the latrine used by kitchen personnel is indispensable. In a diarrhea epidemic situation everybody ought to have an opportunity to wash the hands after having visited the latrine.

#### Care of Latrines

The latrine shall be kept neat and clean by tidying it up once every day. The seats shall be washed at regular intervals, daily at least during diarrhea epidemics, and they shall be disinfected with, for example, a 5-percent chlorinated lime solution. One must also see to it that toilet paper is available. In a dry latrine, sawdust or peat shall be used as a moisture absorption material, and superphosphate in order to avert flies and the risk of odors.

#### V. Saunas and Swimming Beaches

An encampment area should have one sauna or more, so that everybody at the camp can be provided an opportunity to take a sauna at least twice a week.

The sauna should not be built too near a lake or other watercourse, in such a way that the washing water goes directly into the watercourse. Waste water from the sauna is dealt with as indicated in the section "Waste Water."

In the construction, inside finishing, and cleanliness regime of the sauna one shall be guided by the pertinent passages of the instructions for cleanliness in saunas for garrison personnel (Letter No 1110/E1- and ehgysto/Dal/24.06.1971 of the General Staff).

## Swimming Beaches

Swimming is permitted only on a beach declared for the purpose.

The area is to be kept tidy and is to be secured against the presence on the swimming beach of sunken trees, branches, or other objects that might cause accidents. In the summertime the swimming beach shall be cleared and cleaned up before the swimming season starts. Pier or float structures are to be put in order sufficiently often and are to be kept clean, so that they do not become slippery or dangerous in any other way.

## VI. Vehicle Maintenance Stations

Fixed maintenance stations for vehicles are to be set up in an area where the activity is not dangerous to groundwater. On an occasional exercise the dispensing of fuel, the changing of oil, and other comparable work is strictly prohibited on the watersheds of a water supply system.

Dispensing fuel and changing oil should take place at fixed maintenance stations on a concrete foundation structure built for the purpose, one which prevents pollution of groundwater.

Oil refuse is collected in receptacles provided for the purpose, which are conveyed out of the encampment area when the camp closes. Even small quantities of oil refuse must not be conveyed to the dump site for the encampment area.

The place for the washing of vehicles should be clearly marked out. The place shall be chosen in such fashion that washing water does not spoil groundwater or a swimming area. The washing of automotive vehicles so close to a lake or the like that the washing water enters the watercourse directly is prohibited.

## VII. Environmental Protection

In planning encampment areas one should take into account the underlying natural surroundings and shall seek to preserve their special features. Since a shoreline is a particularly vulnerable element of a terrain, it is to be kept clean and structures near the shore, such as saunas, are to be positioned under the shelter of arboreal vegetation.

Training and exercises are to be arranged in such fashion that needless damage to arboreal vegetation and plant life are avoided. Felling trees and breaking branches are permitted only in accordance with directives issued by a forestry official. The opening of a new gravel pit is permitted only with authorization from the Defense Ministry. Taking of gravel shall not go so deep that groundwater is laid bare.

In order to avoid wearing away of terrain, routes for vehicle traffic are to be planned with deliberation. In the same way, when plans are being made for the placement of lodging areas, structures, and the various maintenance stations traffic on foot is to be taken into consideration in such fashion that particularly attractive sections of the landscape shall be preserved from needless trampling and wearing down. Particular attention should be devoted to pine barrens, which renew themselves only slowly; these can be preserved, for example, by being utilized only in rotation.

The spoiling and littering of natural surroundings are best prevented by means of clear directives and a positive camp discipline, and above all by the good example of superiors.



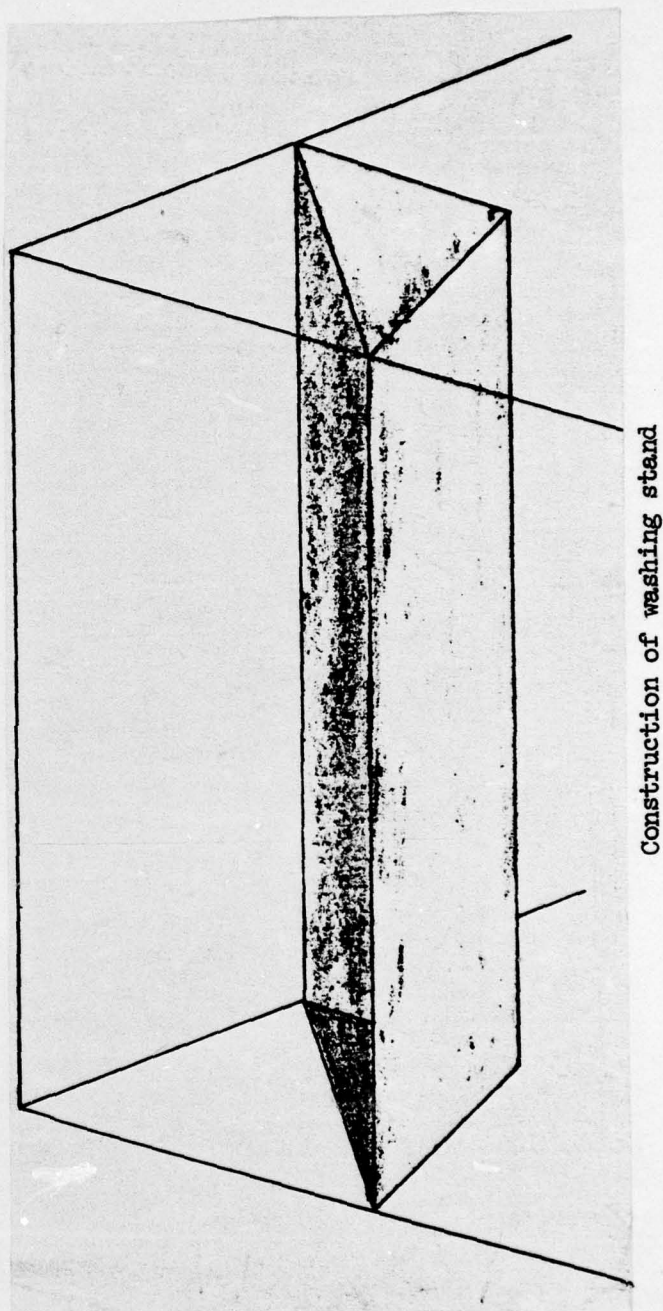
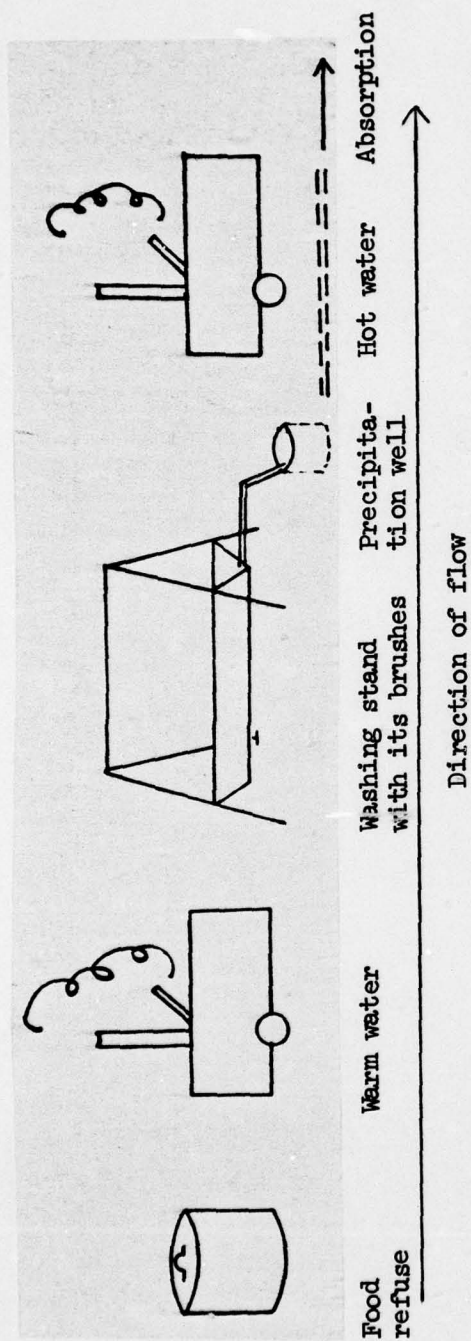


Figure 1. Arrangement of messkit washing.

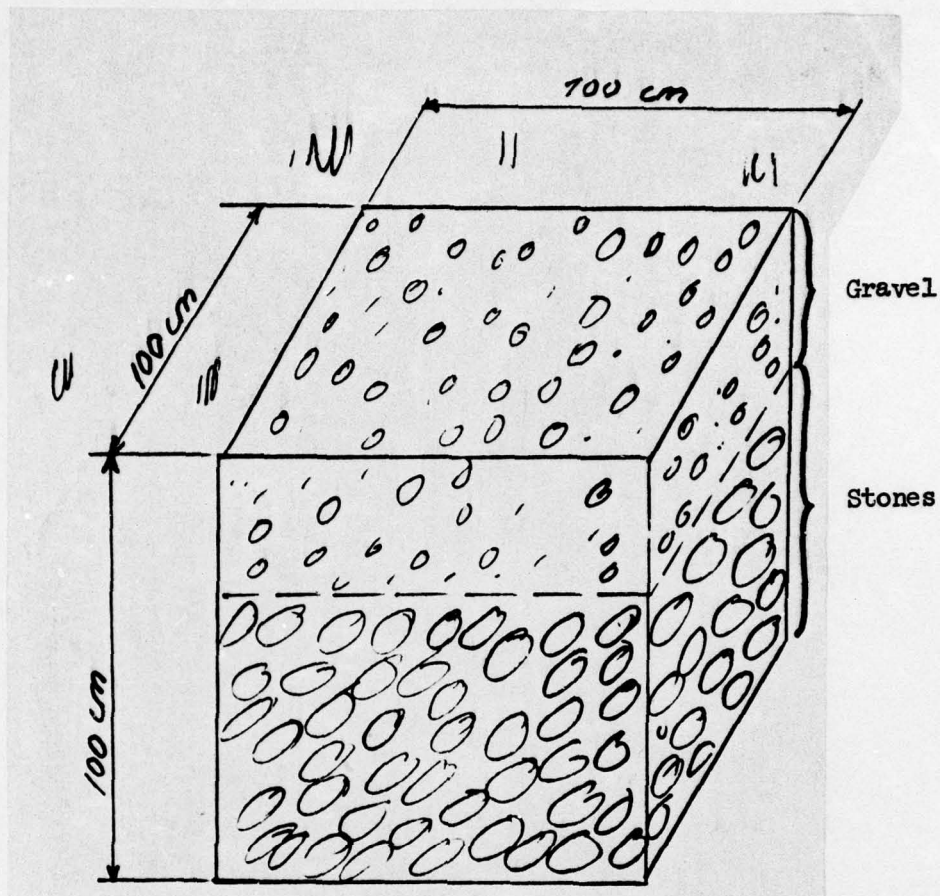


Figure 2. An absorption well (a mere pit can be dug for use lasting only momentarily).